UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,821	10/11/2006	Robert-Paul Mario Berretty	NL 040363	5184

24737 7590 10/20/2009

PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

EXAMINER	
ZEILBERGER, DANIEL	
ART UNIT	PAPER NUMBER
2624	
MAIL DATE	DELIVERY MODE
10/20/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/599,821	BERRETTY, ROBERT-PAUL MARIO	
	Examiner	Art Unit	
	DANIEL ZEILBERGER	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 October 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8 and 12-14* is/are rejected.

7)☒ Claim(s) *9-11* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *07/24/07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 13 is rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. Supreme Court precedent[1] and recent Federal Circuit decisions[2] indicate that a statutory "process" under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. While the instant claim(s) recite a series of steps or acts to be performed, the claim(s) neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process. Specifically, claim 13 discloses a receiving step, a creating output pixels step, a creating output image step, and a providing step. However, none of these aforementioned steps either are tied to a another statutory category or transform any underlying subject matter to a different state or thing.

Claim 14 is rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. Claim 14 recites a "computer program product". However, the "computer program product" appears to be nothing more than a

---

[1] *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876).

[2] *In re Bilski*, 88 USPQ2d 1385 (Fed. Cir. 2008).

"program", i.e. software. Software is not a process, machine, manufacture, or composition of matter, and is thus not one of the four statutory categories of invention.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. *Claims 5-8* are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 recites "sequentially selecting input pixels per row, selecting a hidden image pixel for...". However, earlier in claim 1, upon which claim 5 depends, input pixels are only associated with the input image; the hidden image information is not part of the input image. Thus it is unclear how hidden image pixels are being selected when selecting input pixel, since hidden image pixels are not input pixels. Appropriate correction is required, however for the purposes of examination, "sequentially selecting input pixels" will be interpreted as --sequentially selecting pixels--.

Further regarding claim 5, the claim recites "the first number and/or the second number". However, the scope of this feature is unclear. Specifically, it is unclear whether the "and" should determine the scope, in which case both numbers must be greater than zero, or the "or" should determine the scope, in which case only one of the numbers must be greater than zero. Appropriate correction is required, however for the purposes of examination, "the first number and/or the second number being greater

than zero" will be interpreted as --at least one of the first number and the second number are greater than zero--. **Claims 6-8** contain essentially the same problem with "and/or" and are rejected for the same reasoning.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. *Claims 1-5 and 12-14* are rejected under 35 U.S.C. 103(a) as being unpatentable over Meijers (US Patent 5,929,859) in view of Simpson et al. (US Patent 6,466,205), hereinafter referenced as Meijers and Simpson, respectively.

Regarding **claim 1**, Meijers discloses an image processing system for generating at least one output image associated with an output viewpoint from an input image associated with an input viewpoint through a depth-dependent transformation (see column 6 lines 20-29 and 58-60, and column 8 lines 7-25); the images being represented as an input pixel array and an output pixel array, respectively (see column 6 lines 20-21 and column 8 lines 12-18); the image processing system comprising:

- an input for receiving the input image, the input image being a pre-filtered 2D representation of 3D objects as seen from the input viewpoint, and comprising for each input pixel an associated input pixel value and an associated input pixel depth (see column 6 lines 20-29, wherein a 2D input image comprised of an array of pixels,

wherein for each pixel a pixel value is given as well as a depth value, wherein as disclosed in column 8 lines 7-10, the input image corresponds with the image as observed from O_1);

- a video processor being operative to create output pixels of the output image (see column 6 lines 58-59, wherein a processor uses the input image and the input depth to generate at least one output image) by:

- transforming each input pixel to a transformed input pixel, associated with the output viewpoint, as a function of the input pixel depth (see column 8 lines 7-25, wherein the output image corresponding with observation O_2 is created by transforming the input image pixels, wherein the transformation is a function of pixel depth z_i);

- creating the output image based on the transformed input pixels (see column 8 lines 7-25, wherein the output image corresponding with observation O_2 is created by transforming the input image pixels); and

- an output for providing the output image for subsequent rendering (see column 7 lines 1-3, wherein a D/A converter presents the output images on a suitable display such as a stereoscopic display).

Meijers fails to disclose “a hidden image… the hidden image being another 2D representation of the 3D objects and comprising information, which information is at least partly occluded from the input viewpoint” and “using hidden image pixels for filling de-occluded areas and for at least one pixel position adjacent to the de-occluded areas for preventing ghost line artifacts, caused by transformation of the pre-filtered input

image". However, the Examiner maintains that it would have been obvious, in view of Simpson, to provide:

a hidden image… the hidden image being another 2D representation of the 3D objects and comprising information, which information is at least partly occluded from the input viewpoint (see figure 8 and column 6 lines 7-52, wherein frames from previous or future times are looked up to obtain pixel data of areas of objects that are occluded in a current frame);

using hidden image pixels for filling de-occluded areas and for at least one pixel position adjacent to the de-occluded areas for preventing ghost line artifacts, caused by transformation of the pre-filtered input image (see figure 8 and column 6 lines 7-52, wherein frames from previous or future times are looked up to obtain pixel data of areas of objects that are occluded in a current frame, wherein once the related pixels are found, they are used to generate a value for the undefined pixels in the current frame, wherein afterwards some spatial edge cleanup is employed by smoothing the edges with the known data, wherein this smoothing operation would cause pixels adjacent to the missing region to be modified).

Therefore, the Examiner maintains that it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Meijers, by specifically providing "a hidden image… the hidden image being another 2D representation of the 3D objects and comprising information, which information is at least partly occluded from the input viewpoint" and "using hidden image pixels for filling de-occluded areas and for at least one pixel position adjacent to the de-occluded areas for preventing

ghost line artifacts, caused by transformation of the pre-filtered input image", as taught by Simpson, for the purpose of obtaining areas of objects that are occluded in a current frame so that the data is available when shifting the object such as for generating the stereoscopic images on Meijers, which is a use suggested by Simpson at column 11 line 34 through column 12 line 9.

Regarding **claim 2**, the combination of Meijers and Simpson further discloses:

wherein the depth-dependent transformation is a transformation from the input viewpoint to a predetermined output viewpoint and wherein the hidden image is associated with the output viewpoint (see Meijers at column 8 lines 7-10, wherein the input is from viewpoint O_1 and the output is at viewpoint O_2, and further see above disclosure of Simpson, wherein the images of the past and future frames, i.e. the hidden image, are used in determining the data occluded in the current input frame).

Therefore, the Examiner maintains that it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Meijers, by specifically providing "wherein the depth-dependent transformation is a transformation from the input viewpoint to a predetermined output viewpoint and wherein the hidden image is associated with the output viewpoint", as taught by Simpson, for the purpose of obtaining areas of objects that are occluded in a current frame so that the data is available when shifting the object such as for generating the stereoscopic images on Meijers, which is a use suggested by Simpson at column 11 line 34 through column 12 line 9.

Regarding **claim 3**, Simpson further discloses:

wherein the hidden image is associated with the input viewpoint (see figure 8 and column 6 lines 7-52 wherein the hidden image data is used to fill in occluded areas of the input image and are thus necessarily associated with the input viewpoint) and the hidden image pixels are associated with a hidden image pixel value and a hidden image pixel depth (see Simpson at column 10 lines 21-50 and column 11 lines 45-50, wherein all of the image information has depth information), the video processor being operative to:

transform each hidden image pixel to a transformed hidden image pixel, associated with the output viewpoint, as a function of the hidden image pixel depth; and create the output image using transformed hidden image pixels for filling de-occluded areas and for at least one pixel position adjacent to the de-occluded areas (see above disclosure of Simpson, wherein after the hidden image information has been added to the current input image, it would have been obvious to also apply the transformation disclosed in Meijers to the hidden image information).

Therefore, the Examiner maintains that it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Meijers, by specifically providing “transform each hidden image pixel to a transformed hidden image pixel, associated with the output viewpoint, as a function of the hidden image pixel depth; and create the output image using transformed hidden image pixels for filling de-occluded areas and for at least one pixel position adjacent to the de-occluded areas”, as taught

by Simpson, for the purpose of obtaining areas of objects that are occluded in a current frame so that the data is available when shifting the object such as for generating the stereoscopic images on Meijers, which is a use suggested by Simpson at column 11 line 34 through column 12 line 9.

Regarding **claim 4**, Meijers further discloses:

wherein rows of pixels of the pixel arrays are used for horizontal display on successive display lines (see column 7 lines 1-3, wherein the output images are displayed on a stereoscopic display, wherein it is disclosed in column 7 lines 34-37 that each row of pixels in an image runs parallel to the x-axis, and thus each row of pixels would be a horizontal display line) and the video processor is operative to sequentially process input pixels per row (see column 12 lines 8-16, wherein the input pixels are sequentially processed per row).

Regarding **claim 5**, Meijers further discloses:

selection means for sequentially selecting input pixels per row(see column 12 lines 8-16, wherein the pixels are sequentially processed per row).

Meijers fails to specifically disclose the other limitations of claim 5, however the Examiner maintains that it would have been obvious, in view of Simpson, to provide:

selecting a hidden image pixel for: pixel positions in a de-occluded area; a first number of pixel positions before the de-occluded area; and a second number of pixel

positions after the de-occluded area, the first number and/or the second number being greater than zero; and transformed input pixels for other pixel positions on the display line (see figure 8 and column 6 lines 7-52, wherein frames from previous or future times are looked up to obtain pixel data of areas of objects that are occluded in a current frame, wherein once the related pixels are found, they are used to generate a value for the undefined pixels in the current frame, wherein afterwards some spatial edge cleanup is employed by smoothing the edges with the known data, wherein this smoothing operation would cause pixels adjacent to the missing region to be modified and thus factor in the hidden image pixels, wherein this operation does not affect regions that are not located in or near the de-occluded areas and thus for those areas the input image pixels would still be used).

Therefore, the Examiner maintains that it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Meijers, by specifically providing “selecting a hidden image pixel for: pixel positions in a de-occluded area; a first number of pixel positions before the de-occluded area; and a second number of pixel positions after the de-occluded area, the first number and/or the second number being greater than zero; and transformed input pixels for other pixel positions on the display line”, as taught by Simpson, for the purpose of obtaining areas of objects that are occluded in a current frame so that the data is available when shifting the object such as for generating the stereoscopic images on Meijers, which is a use suggested by Simpson at column 11 line 34 through column 12 line 9.

Regarding **claim 12**, Simpson further discloses:

wherein the input is arranged for receiving at least one additional hidden image, the additional hidden image comprising information, which information is at least partly hidden by objects in other hidden images (see column 6 lines 45-52, wherein multiple previous and future frames are searched in order to find the occluded data since in some of the previous and future frames the data will still be occluded) and the video processor being operative to create output pixels of the output image dependent on the depth dependent transformation, the input image, the hidden image and the at least one additional hidden image (see Simpson at column 10 lines 21-50 and column 11 lines 45-50, wherein all of the image information has depth information, wherein after the hidden image information has been added to the current input image, it would have been obvious to also apply the transformation disclosed in Meijers to the hidden image information).

Therefore, the Examiner maintains that it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Meijers, by specifically providing "wherein the input is arranged for receiving at least one additional hidden image, the additional hidden image comprising information, which information is at least partly hidden by objects in other hidden images and the video processor being operative to create output pixels of the output image dependent on the depth dependent transformation, the input image, the hidden image and the at least one additional hidden image", as taught by Simpson, for the purpose of obtaining areas of objects that are occluded in a current frame so that the data is available when shifting the object such as

for generating the stereoscopic images on Meijers, which is a use suggested by Simpson at column 11 line 34 through column 12 line 9.

Regarding **claim 13**, Meijers discloses a method for generating at least one output image associated with an output viewpoint from an input image associated with an input viewpoint through a depth-dependent transformation (see column 6 lines 20-29 and 58-60, and column 8 lines 7-25); the images being represented as an input pixel array and an output pixel array, respectively (see column 6 lines 20-21 and column 8 lines 12-18); the method comprising:

- receiving the input image, the input image being a pre-filtered 2D representation of 3D objects as seen from the input viewpoint, and comprising for each input pixel an associated input pixel value and an associated input pixel depth (see column 6 lines 20-29, wherein a 2D input image comprised of an array of pixels, wherein for each pixel a pixel value is given as well as a depth value, wherein as disclosed in column 8 lines 7-10, the input image corresponds with the image as observed from O_1);

- creating output pixels of the output image (see column 6 lines 58-59, wherein a processor uses the input image and the input depth to generate at least one output image) by:

transforming each input pixel to a transformed input pixel, associated with the output viewpoint, as a function of the input pixel depth (see column 8 lines 7-25, wherein the output image corresponding with observation O_2 is created by transforming the input image pixels, wherein the transformation is a function of pixel depth z_i);

creating the output image based on the transformed input pixels (see column 8 lines 7-25, wherein the output image corresponding with observation O_2 is created by transforming the input image pixels); and

providing the output image for subsequent rendering (see column 7 lines 1-3, wherein a D/A converter presents the output images on a suitable display such as a stereoscopic display).

Meijers fails to disclose "a hidden image… the hidden image being another 2D representation of the 3D objects and comprising information, which information is at least partly occluded from the input viewpoint" and "using hidden image pixels for filling de-occluded areas and for at least one pixel position adjacent to the de-occluded areas for preventing ghost line artifacts, caused by transformation of the pre-filtered input image". However, the Examiner maintains that it would have been obvious, in view of Simpson, to provide:

a hidden image… the hidden image being another 2D representation of the 3D objects and comprising information, which information is at least partly occluded from the input viewpoint (see figure 8 and column 6 lines 7-52, wherein frames from previous or future times are looked up to obtain pixel data of areas of objects that are occluded in a current frame);

using hidden image pixels for filling de-occluded areas and for at least one pixel position adjacent to the de-occluded areas for preventing ghost line artifacts, caused by transformation of the pre-filtered input image (see figure 8 and column 6 lines 7-52, wherein frames from previous or future times are looked up to obtain pixel data of areas

of objects that are occluded in a current frame, wherein once the related pixels are found, they are used to generate a value for the undefined pixels in the current frame, wherein afterwards some spatial edge cleanup is employed by smoothing the edges with the known data, wherein this smoothing operation would cause pixels adjacent to the missing region to be modified).

Therefore, the Examiner maintains that it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Meijers, by specifically providing "a hidden image… the hidden image being another 2D representation of the 3D objects and comprising information, which information is at least partly occluded from the input viewpoint" and "using hidden image pixels for filling de-occluded areas and for at least one pixel position adjacent to the de-occluded areas for preventing ghost line artifacts, caused by transformation of the pre-filtered input image", as taught by Simpson, for the purpose of obtaining areas of objects that are occluded in a current frame so that the data is available when shifting the object such as for generating the stereoscopic images on Meijers, which is a use suggested by Simpson at column 11 line 34 through column 12 line 9.

Regarding **claim 14**, Meijers further discloses:

A computer program product which program is operative to cause a processor to perform the method as claimed in claim 13 (see column 6 lines 39-41 and 58-59, wherein it is disclosed that the 3D-rendering process is executed using the main CPU of the computer or by means of a graphics processor).

Allowable Subject Matter

6. Claims 6-8 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

7. Claims 9-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding **claim 6**, the claim provides for having at least one of the first and second number of pixel positions as dependent on a width of a horizontal pre-filter, used during recording of the input image. While Simpson discloses smoothing operation that would have some number of pixel positions, Simpson fails to disclose having the number of pixel positions be specifically dependent on a width of a horizontal pre-filter. In addition, no other known prior art provides for this feature in combination with the limitations included in the claims upon which claim 6 depends.

Regarding **claim 7**, the claim provides for having at least one of the first and second number of pixel positions being received at the input as additional information about the input image. While Simpson discloses smoothing operation that would have some number of pixel positions, Simpson fails to disclose having the number of pixel positions be specifically received at the input as additional information about the input image. In addition, no other known prior art provides for this feature in combination with the limitations included in the claims upon which claim 7 depends.

Regarding **claim 8**, the claim provides for having at least one of the first and second number of pixel positions being determined based on an analysis of the input image. While Simpson discloses smoothing operation that would have some number of pixel positions, Simpson fails to disclose having the number of pixel positions be specifically determined based on an analysis of the input image. In addition, no other known prior art provides for this feature in combination with the limitations included in the claims upon which claim 8 depends.

Regarding **claim 9**, the claim provides for "each input pixel being indicated by an x-coordinate and an y- coordinate, the video processor being operative to sequentially process input pixels of a row in a direction opposite to a displacement from the input viewpoint to the output viewpoint along the x-axis; the processing including: maintaining an x-coordinate extent that indicates for already processed input pixels with respect to a predetermined start position a furthest x-coordinate already occluded by at least one transformed input pixel, where the furthest x-coordinate is a highest x-coordinate if the processing direction is from left to right and a lowest x-coordinate if the processing direction is from right to left; maintaining a look ahead extent for determining ahead of the x-coordinate extent that a hidden image pixel is de-occluded if a transformed input pixel increases the look ahead extent by more than a predetermined threshold for enabling the pixel selection means to select a hidden image pixel for the first number of pixel positions before the position of the de-occluded area". While Meijers and Simpson provide for the limitations of the claims upon which claim 9 depends, they fail to provide the specifics of claim 9. In addition, no other prior art has been found that provides

these features in combination with the limitations in the claims upon which claim 9 depends. **Claim 11** depends upon claim 9 and thus contains all the features of claim 9.

Regarding **claim 10**, the claim provides for "wherein the video processor is operative to maintain a hidden image x-coordinate extent for indicating for already processed hidden image pixels with respect to a predetermined start position a furthest x-coordinate already occluded by at least one transformed hidden image pixel, where the furthest x-coordinate is a highest x-coordinate if the processing direction is from left to right and a lowest x-coordinate if the processing direction is from right to left". While Meijers and Simpson provide for the limitations of the claims upon which claim 10 depends, they fail to provide the specifics of claim 10. In addition, no other prior art has been found that provides these features in combination with the limitations in the claims upon which claim 10 depends.

Citation of Pertinent Prior Art

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Curti et al. (European Patent Application Publication EP 1353518 A1) discloses a process for generating stereoscopic images from monocular images (see paragraph 50).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL ZEILBERGER whose telephone number is (571)270-3570. The examiner can normally be reached on M-F 8:00-4:30pm est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vikkram Bali can be reached on (571)272-7415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Daniel Zeilberger
Examiner
Art Unit 2624

DZ
10/14/09

/VIKKRAM BALI/
Supervisory Patent Examiner, Art Unit 2624